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•Practice Limited to Federal Agencies

July 1, 2003

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**Technology Center 2100** 

Re:

PO Box 1450

Commissioner for Patents

Alexandria, VA 22313-1450

U.S. Utility Patent Application

Appl. No. 09/987,193; Filed: November 13, 2001

Method and Apparatus for a Parallel Correlator

and Applications Thereof

Inventors:

Rawlins et al.

Our Ref:

1744.1200001

Sir:

Transmitted herewith for appropriate action are the following documents:

- 1. Supplemental Information Disclosure Statement;
- 2. Four (4) sheets of Form PTO-1449 listing fifty-one (51) reference documents;
- 3. One (1) copy of each referenced document; and
- One (1) return postcard. 4.

It is respectfully requested that the attached postcard be stamped with the date of filing of these documents, and that it be returned to our courier. In the event that extensions of time are necessary to prevent abandonment of this patent application, then such extensions of time are hereby petitioned.

Steme, Kessler, Goldstein & Fox PLLC. : 1100 New York Avenue, NW : Washington, DC 20005 : 202.371.2600 f 202.371.2540 : www.skqf.com

Commissioner for Patents July 1, 2003 Page 2

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

Patrick E. Garrett Attorney for Applicant Registration No. 39,987

PEG:mlb Enclosures

SKGF\_DC1:151186.1



## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Rawlins et al.

Appl. No. 09/987,193

Filed: November 13, 2001

For:

Method and Apparatus for a Parallel Correlator and

Applications Thereof

Art Unit: 2124

Examiner: Malzahn, David H.

Atty. Docket: 1744.1200001

## Supplemental Information Disclosure Statement

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Commissioner for Patents PO Box 1450 Alexandria, VA 22313-1450

JUL 0 2 2003

Technology Center 2100

Sir:

Listed on accompanying Form PTO-1449 are documents that may be considered material to the examination of this application, in compliance with the duty of disclosure requirements of 37 C.F.R. §§ 1.56, 1.97 and 1.98. The numbering on this Supplemental Information Disclosure Statement is a continuation of the numbering in Applicants' Information Disclosure Statement filed on September 23, 2002 in connection with the above-captioned application.

Applicants have listed publication dates on the attached PTO-1449 based on information presently available to the undersigned. However, the listed publication dates should not be construed as an admission that the information was actually published on the date indicated.

Applicants reserve the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may

not be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered.

Applicants provide the following comments regarding the documents:

Document AB50 was cited by in an Office Action in co-pending U.S. Patent Application Serial No. 09/376,509, filed August 18, 1999, entitled "Method and System for Ensuring Reception of a Communications Signal," directed to related subject matter.

Documents AC50-AE50, AG50, AI50 and AC51 were cited in an Office Action in co-pending U.S. Patent Appl. No. 09/476,330, filed January 3, 2000, entitled, "Multi-Mode, Multi-Band Communication System," directed to related subject matter.

Document AF50 was cited in an Office Action in co-pending U.S. Patent Appl. No. 09/567,963, filed May 10, 2000, entitled, "Frequency Synthesizer Using Universal Frequency Translation Technology," directed to related subject matter.

Documents AH50, AA51 and AB51 were cited in an Office Action in co-pending U.S. Patent Appl. No. 09/526,041, filed March 14, 2000, entitled, "DC Offset, Re-radiation, and I/Q Solutions Using Universal Frequency Translation Technology," directed to related subject matter.

Document AE51 was cited in an Office Action in co-pending U.S. Patent Application Serial No. 09/476,092, filed January 3, 2000, entitled "Analog Zero IF FM Decoder and Embodiments Thereof, Such as the Family Radio Service," directed to related subject matter. Also cited in said Office Action were U.S. Patent Nos. 5,600,680 and 5,606,731, which have already been cited in the present application in the Supplemental Information Disclosure Statement of September 23, 2002.

Documents AF51, AG51 and AF52 are co-owned patents which are directed to related subject matter.

Documents AH51 and AN58-AP58 were cited in an Office Action in co-pending U.S. Patent Appl. No. 09/567,977, filed May 10, 2000, entitled, "Optical Down-converter Using Universal Frequency Translation Technology," directed to related subject matter.

Documents AI51, AA52 and AB52 were cited in an International Search Report in PCT Appl. No. PCT/US02/35861, filed November 8, 2002, entitled, "Method and Apparatus for Reducing DC Offsets in a Communication System," directed to related subject matter.

Documents AC52, AD52, AK22-AM22 and AQ58 were cited in an International Search Report in PCT Appl. No. PCT/US01/15555, filed May 16, 2001, entitled, "Apparatus, System, and Method for Down-Converting and Up-Converting Electromagnetic Signals," directed to related subject matter. Also cited in said Search Report were U.S. Patent Nos. 4,888,557, 5,454,007, 5,640,698 and 5,705,949, and PCT Publication No. WO 96/02977, which have already been cited in the present application in the Information Disclosure Statement of September 23, 2002.

Documents AE52 and AJ23 were cited in an Invitation to Pay Additional Fees in counterpart PCT Appl. No. PCT/US01/43077, filed November 14, 2001, entitled "Method and Apparatus for a Parallel Correlator and Applications Thereof," directed to related subject matter.

Documents AG52-AI52 and AA53 were cited in an Office Action in co-pending U.S. Patent Application No. 09/986,764, filed November 9, 2001, entitled "Method and

Apparatus for Reducing DC Offsets in a Communication System," directed to related subject matter.

Documents AK20, AL20, AJ21, AK21, AL21, AP56 and AQ56 were cited in an International Search Report in counterpart PCT Appl. No. PCT/US01/12086, filed April 13, 2001, entitled, "Frequency Converter," directed to related subject matter. Also cited in said Search Report was U.S. Patent No. 5,844,449, which has already been cited in the present application in the Information Disclosure Statement of September 23, 2002.

Documents AM21 and AJ22 were cited in an Official Notice of Rejection in copending Japanese Patent Application No. 2000-577,765, filed June 21, 2000, entitled "Method and System for Ensuring Reception of a Communications Signal," directed to related subject matter. Also cited in said Notice of Rejection were Japanese Patent Publication Nos. 56-114451, 8-139524 and 8-32556, which have already been cited in the present application in the Information Disclosure Statement of September 23, 2002.

The other documents in the PTO-1449 do not fall within the above categories.

It is noted that some of these documents could be classified in more than one of the above categories.

This statement should not be construed as a representation that information more material to the examination of the present patent application does not exist. The Examiner is specifically requested not to rely solely on the material submitted herewith.

Applicants have checked the appropriate boxes below.

□ 1. Statement under 37 C.F.R. 1.704(d). Each item of information contained in this

Information Disclosure Statement was cited in a communication from a

foreign patent office in a counterpart application and this communication

was not received by any individual designated in 37 C.F.R. § 1.56(c) more than thirty days prior to the filing of this information disclosure statement.

- ☑ 2. Filing under 37 C.F.R. § 1.97(b). This Information Disclosure Statement is being filed before the mailing date of a first Office Action on the merits. No statement or fee is required.
- □ 3. Filing under 37 C.F.R. § 1.97(c). This Information Disclosure Statement is being filed more than three months after the U.S. filing date AND after the mailing date of the first Office Action on the merits, but before the mailing date of a Final Rejection, or Notice of Allowance, or an action that otherwise closes prosecution in the application.
  - □ a. Statement under 37 C.F.R. § 1.97(e)(1). I hereby state that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).
  - □ b. Statement under 37 C.F.R. § 1.97(e)(2). I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).
  - □ c. Attached is our PTO-2038 Credit Card Payment Form in the amount of in payment of the fee under 37 C.F.R. § 1.17(p).
- □ 4. Filing under 37 C.F.R. § 1.97(d) This Information Disclosure Statement is being filed more than three months after the U.S. filing date and after the mailing date of a Final Rejection or Notice of Allowance, but before payment of the Issue Fee. Enclosed find our Check No. \_\_\_\_\_\_ in the

amount of \$ \_\_\_\_ in payment of the fee under 37 C.F.R. § 1.17(p); in addition:

- □ a. Statement under 37 C.F.R. § 1.97(e)(1). I hereby state that each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).
- □ b. Statement under 37 C.F.R. § 1.97(e)(2). I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).
- □ 5. The document(s) was/were cited in a search report by a foreign patent office in a counterpart foreign application. Submission of an English language version of the search report that indicates the degree of relevance found by the foreign office is provided in satisfaction of the requirement for a concise explanation of relevance. 1138 OG 37, 38.
- - Document AK20 (DE 196 27 640 A1) appears to describe a mixer. Document AK20 is a counterpart German application of U.S. Patent No. 5,680,078, which has already been cited in the present application in the Information Disclosure Statement of September 23, 2002.
  - Document AL20 (EP 0 087 336 A1) appears to describe a transistorized mixer for microwave transmitters. The granted version of document AL20 is cited as document AM20 (EP 0 087 336 B1) and contains an Englishlanguage version of the claims.

- Document AK21 (FR 2 669 787 A1) appears to describe a symmetrical super high frequency mixer. A copy of the English-language abstract of document AK21 is enclosed as document AR56 on the attached PTO-1449.
- Document AM21 (JP 61-30821) appears to describe a squelch device. A copy of the English-language abstract of document AM21 is enclosed as document AP57 on the attached PTO-1449.
- Document AJ22 (JP 5-327356) appears to describe a frequency converter. A copy of the English-language abstract of document AJ22 is enclosed as document AQ57 on the attached PTO-1449.
- □ 7. Copies of the documents were cited by or submitted to the Office in an IDS that complies with 37 C.F.R. § 1.98(a)-(c) in Application No. \_\_\_\_\_\_\_, filed \_\_\_\_\_\_, which is relied upon for an earlier filing date under 35 U.S.C. § 120. Thus, copies of these documents are not attached. 37 C.F.R. § 1.98(d).

It is respectfully requested that the Examiner initial and return a copy of the enclosed PTO-1449, and indicate in the official file wrapper of this patent application that the documents have been considered.

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

Patrick E. Garrett Attorney for Applicants Registration No. 39,987

Date: 7-1-03 1100 New York Avenue, N.W. Washington, D.C. 20005-3934 (202) 371-2600

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FORM PTO-1449  SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT							APPLICANT Rawlins et al.					
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	AF50			09/1980 05/1991		Yamanaka Tang				<del> </del>		
	AG50											
	AH50	5,937,013		08/1999		Lam et al.						
	AI50	6,014,551		01/2000		Pesola et al.						
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	AK20	DE	196 27 640 A1		01/1997	77	DE	Н	)3D	7/12	No	
	AL20	EP (	P 0 087 336 A1		08/1983		EP	н	)3D	7/12	No	
	AM20	EP 0 087 336 B1		07/1986			EP	Н	)3D	7/12	No	
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	AP	<u>56</u>	Razavi, B., "A 900-MHz/1.8-Ghz CMOS Transmitter for Dual-Band Applications," Symposium on VLSI Circuits Digest of Technical Papers, IEEE, pp. 128-131 (1998).									
	AQ	<u>56</u>	Ritter, G.M., "SDA, A New Solution for Transceivers," 16th European Microwave Conference, Microwave Exhibitions and Publishers, pp. 729-733 (September 8, 1986).								Microwave	
	AR	<u>56</u>	DIALOG File 351 (Derwent WPI) English Language Patent Abstract for FR 2 669 787, 1 page (May 29, 1992 Date of publication of application).									
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APPLICATION NO ATTY. DOCKET NO. 1744.1200001 09/987,193 FORM PTO-1449 APPLICANT Rawlins et al. SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT GROUP FILING DATE 2001 2124 November 13, **U.S. PATENT DOCUMENTS EXAMINER FILING DATE** DOCUMENT DATE NAME **CLASS** SUB-INITIAL **CLASS** NUMBER AA51 6,073,001 06/2000 Sokoler 07/2000 Palermo et al. AB51 6,085,073 05/21/1999 AC51 6,400,963 B1 06/2002 Glöckler et al. RECEIVED AD51 6,230,000 B1 05/2001 Tayloe AE51 5,483,695 01/1996 Pardoen 0-2-2003 04/16/1999 04/2003 Sorrells et al. AF51 6,542,722 B1 04/16/1999 Cook et al. AG51 6,560,301 B1 05/2003 Technology Center 2/100 **AH51** 6,098,046 08/2000 Cooper et al. AI51 04/1995 Goldstein 5,410,326 FOREIGN PATENT DOCUMENTS **EXAMINER** INITIAL DOCUMENT NUMBER DATE COUNTRY CLASS SUB-**TRANSLATION CLASS** AJ21 EP H03D 7/12 N/A 08/1997 EP 0 789 449 A2 7/14 AK21 FR 2 669 787 A1 05/1992 FR H03D No AL21 GB 2 324 919 A 11/1998 GB H<sub>0</sub>3D 7/18 N/A JP H04B 1/10 No AM21 JP 61-30821 02/1986 OTHER (Including Author, Title, Date, Pertinent Pages, etc.) Akos, D.M. et al., "Direct Bandpass Sampling of Multiple Distinct RF Signals," IEEE Transactions on AN <u>57</u> Communications, IEEE, Vol. 47, No. 7, pp. 983-988 (July 1999). Patel, M. et al., "Bandpass Sampling for Software Radio Receivers, and the Effect of Oversampling on Aperture <u>57</u> AO Jitter," VTC 2002, IEEE, pp. 1901-1905 (2002). English-language Abstract of Japanese Patent Publication No. 61-030821, from http://www1.ipdl.ipo.go.jp, 1 AP <u>57</u> Page (February 13, 1986- Date of publication of application).

EXAMINER DATE CONSIDERED

Page (December 10, 1993 - Date of publication of application).

**EXAMINER:** Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

Business Magazines & Media, Inc., pp. 58, 60, 62 and 69 (March 2003).

English-language Abstract of Japanese Patent Publication No. 05-327356, from http://www1.ipdl.jpo.go.jp, 1

Tayloe, D., "A Low-noise, High-performance Zero IF Quadrature Detector/Preamplifier," RF Design, Primedia

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	AB52	6,12	7,941	10/20	000	Van F	Ryzin					
	AC52	5,56	4,097	10/19	996	Swan	ke .					
	AD52	5,89	8,912	04/19	999	Heck	et al.					
	AE52	4,66	0,164	04/19	987	Leibo	witz	RECE	IVED			
	AF52			06/20	003	Sorre	lls et al.				04/16/1999	
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	AH52			02/1995		Heck	Heck .		0401			
	AI52	5,47	1,665	11/19	995	Pace	et al.	Technology	Center 21	ΨΟ		
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	AJ22	J22 JP 5-327356			12/1993		JP		H03D	7/00	No	
	AK22	EP (	643 477 A2 &	А3	03/1995		EP		H03D	7/16	N/A	
	AL22	EP 0	877 476 A1		11/1998		EP		H03D	7/16	N/A	
	AM22	EP (	977 351 A1	-	02/2000		EP		H03D	7/16	N/A	
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	AN	<u>58</u>					onic Receiver Ba Electronics, IE					
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	AP	<u>58</u>	Stewart, R.W. and Pfann, E., "Oversampling and sigma-delta strategies for data conversion," <i>Electronics &amp; Communication Engineering Journal</i> , IEEE, pp. 37-47 (February 1998).									
	AQ	<u>58</u>	Rudell, J.C. et al., "A 1.9-Ghz Wide-Band IF Double Conversion CMOS Receiver for Cordless Telephone Applications," <i>IEEE Journal of Solid-State Circuits</i> , IEEE, Vol. 32, No. 12, pp. 2071-2088 (December 1997).									
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